

# On uniqueness of a solution to the problem of reconstruction of homogeneous dielectric layer parameters

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## Abstract

© 2017 Pushpa Publishing House, Allahabad, India. Uniqueness of a solution to the problem of reconstruction of the dielectric layer parameters arising during analysis of a scattered field is investigated. The study is concerned with two cases, which include determining refractive index of a dielectric material filling the layer, and determining thickness of the layer. It is concluded that two measurements, conducted at different and “properly chosen” frequencies, are sufficient to provide uniqueness of a solution to the reconstruction problem.

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## Keywords

Dielectric layer, Inverse problem, Reconstruction of parameters, Uniqueness of solution

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